

Amendments to the Claims

1. (previously presented) A method for producing a low-extractable film comprising the steps of:
 - (a) providing an actinic radiation curable homogeneous aqueous composition having
 - (i) a water soluble compound which contains at least one , -ethylenically unsaturated, radiation polymerizable group and
 - (ii) water;
 - (b) applying said aqueous composition onto a surface; and
 - (c) irradiating the surface with actinic radiation in the presence of the water; thereby forming a cured film wherein less than 50 ppb of uncured residue is extractable from the cured film when immersed and heated in 10 ml of a simulant liquid per square inch of cured film.
2. (original) The method of claim 1 wherein the water soluble compound is an oligomer.
3. (original) The method of claim 2 wherein the oligomer is an acrylate.
4. (previously presented) The method of claim 3 wherein the acrylate is selected from the group consisting of a epoxy acrylate, a epoxy methacrylate, a polyether acrylate, a polyether methacrylate, a polyester acrylate, a polyester methacrylate, a polyurethane acrylate, a polyurethane methacrylate, a melamine acrylate, a melamine methacrylate, a polyethylene glycol diacrylate and a polyethylene glycol dimethacrylate.

5. (original) The method of claim 4 wherein the acrylate is an aromatic or aliphatic acrylate.

6. (original) The method of claim 4 wherein the acrylate is a diacrylate ester of an alkanolglycidyl ether or an ethoxylated aromatic epoxide or a polyethylene glycol diacrylate.

7. (previously presented) The method of claim 6 wherein the diacrylate ester of an alkanolglycidyl ether is 1,4-butanedioldiglycidyl ether or the diacrylate ester is an ethoxylated aromatic epoxide.

8. (original) The method of claim 6 wherein the ethoxylated aromatic epoxide contains 6 to 20 ethoxy groups.

9. (previously presented) The method of claim 8 wherein water is present in an amount ranging from about 5 weight % to about 25 weight %, based on the weight of the aqueous composition.

10. (original) The method of claim 8 wherein the composition has a viscosity between 10 and 100,000 centipoises.

11-12. (canceled)

13. (original) The method of claim 1 wherein the irradiating is carried out with high energy electrons.

14. (original) The method of claim 1 wherein the composition further comprises a photoinitiating system activatable by UV radiation.

15. (original) The method of claim 14 wherein the irradiating is carried out with UV radiation.

16. (previously presented) The method of claim 1 wherein the surface is selected from the group consisting of a polyolefin, a polyethylene terephthalate, a metalized polyethylene terephthalate, polycarbonate, cellulosic material, paper material, cardboard material, metal, glass, polystyrene, polyvinylchloride, polynaphthelene terephthalate, polyacrylate and polyacrylic.

17. (previously presented) The method of claim 16 wherein the surface is a food packaging material.

18. (original) The method of claim 17 wherein the food packaging material is a container or a sheet material.

19. (original) The method of claim 18 wherein the food packaging material is the polyolefin, the metalized polyethylene terephthalate, the polyethylene terephthalate, or the metal.

20. (original) The method of claim 19 wherein the polyolefin is a polyethylene or polypropylene.

21. (original) The method of claim 19 wherein the metal is aluminum foil or steel.

22. (original) The method of claim 17 wherein the simulant liquid is a food simulant.

23. (original) The method of claim 22 wherein the food simulant is selected from the group consisting of a 10% ethanol/water solution; a 50% ethanol/water solution; a 95% ethanol/water solution; a food oil; a fractionated coconut oil having a boiling range of 240-270 C and composed of saturated C₈ (50-65%) and C₁₀ (30-45%) triglycerides; and a mixture of synthetic C₁₀, C₁₂, and C₁₄ triglycerides.

24. (original) The method of claim 16 wherein the simulant liquid is methylene chloride.

25. (original) The method of claim 22 wherein the heating is at least 40 C for at least 240 hours.

26. (original) The method of claim 22 wherein the heating is initially at least about 121 C for 2 hours and then about 40 C for 238 hours.

27-47. (canceled)

48. (previously presented) A packaging material comprising a substrate and a cured film adhered to the substrate surface derived by providing a homogeneous aqueous composition consisting essentially of (a) a water soluble oligomer containing two or more acrylic groups and (b) water; applying the homogeneous aqueous composition on the substrate; and curing by actinic radiation in the presence of the water, such that less than 50 ppb of oligomer residue is extractable from the cured film when immersed and heated in 10 ml of a simulant liquid per square inch of the cured film.

49. (original) The packaging material of claim 48 wherein the packaging material is a food packaging material and the simulant liquid is a food simulant.

50-55. (canceled)